DOCUMENT RESUME

ED 148 324 **IR 005 366**

AUTHOR McAleese, Ray
TITLE The Application of Microteaching Techniques to the Training of University Teachers.
PUB DATE Sep 73
NOTE 9p.; Paper presented at the annual conference of the British Psychological Society (London, England, September 8-10, 1973); For related documents, see IR 005 365-366

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Classroom Observation Techniques; Closed Circuit Television; *Microteaching; Phonotape Recordings; *Teacher Attitudes; Teaching Techniques; Universities

ABSTRACT

In an attempt to devise protocols for the microteaching of university teachers, an experiment was undertaken using 15 subjects in four training sessions. Attitudes of lecturers to training were used as the dependent variable. Independent variables were the feedback medium (CCTV and audio) and the type of feedback (low and high structure). The feedback type relates to systematic observation to describe and analyse lecturing. This high structure technique was used in opposition to the normal microteaching supervisor low structure practice of non-directive sessions. Due to the smallness of the factorial cell size, no statistical treatment of the data was possible; however, available data suggest no observable difference between treatments. (Author/DAG)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED148324

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

The Application of Microteaching Techniques to the Training of University Teachers.

Ray McAleese

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Ray McAleese

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Department of Education,
King's College,
University of Aberdeen.

September, 1973

A paper read at the British Psychological Society's Annual Conference, Royal Holloway College, London 8-10 September, 1973.

IR005366

THE APPLICATION OF MICROTEACHING TECHNIQUES TO THE TRAINING OF UNIVERSITY TEACHERS

ABSTRACT

The use of microteaching techniques in the training of secondary teachers is in danger of becoming orthodoxy. Happily this is not true in the training of university staff. Although there is conflicting evidence as to the nature of microteaching protocols that can be used in both In-Service and Pre-Service secondary teacher training, work has been extended to the training of university teachers. Research that has been undertaken in Aberdeen has attempted to devise protocols for use in the training of teaching staff.

As part of the evaluation programme a two by two experimental design has been carried out using attitudes of lecturers to training as the dependant variable. The Independant variables were:-

1. Feedback Medium ..... a. CCTV
   b. Audio

2. Type of Feedback .... a. Low Structure
   b. High Structure

Of interest is the Type of feedback as one of the treatments was a system of systematic observation used to describe and analyse the lecturing. This (High Structure) technique was used in opposition to normal microteaching supervisory practice of non-directive sessions (Low Structure). The Feedback Medium was either audio recordings of lecturing performance or black and white CCTV recordings.

The experiment was undertaken during the Spring and Summer terms using a total of 15 subjects in four training sessions. Due to the smallness of the factorial cell size no statistical treatment of the data was possible, however, inspection of the data from multiple choice questions and from a content analysis of open ended questions suggests that there is no observable difference between the treatments. Suggestions as to why this occurred will be discussed along with some implications for further research. Further details of the system of systematic observation used will also be given.

Background

In the time allotted I would like to deal with two points that arise from my abstract:-

Firstly, - the nature of the system for analysing lectures

Secondly, - how the system is used.

I will leave the non-significant difference between treatment groups in the training experiment that I refer to in the Abstract (above) to the general discussion and questions after my paper.

Firstly then, microteaching and the systematic observation of lecturing. A considerable amount of research, development and training in both In-Service, and Pre-Service teacher training has utilized systematic observation or interaction analysis (IA) in recent years. Early microteaching research, up to say 1967-1968 was primarily concerned with the component skills approach as exemplified by Stanford work. Since 1968 and in particular since the publication of Ned Flanders' book 'Analysing Teaching Behavior' in 1970, more and more teacher training institutions are using I-A to Augment, or Replace conventional micro-skills in microteaching. When I first used I-A along with microteaching, I used Flanders' categories to Augment a micro-skills approach and provide what can be called an 'Objective Frame of Reference' for the non-directive supervisory conference in the micro-teaching cycle. In training post-graduate teachers Flanders' categories are used to provide data for the supervisory conference and also to provide a means of focussing the students attention on specific aspects of teaching/

teaching during the Replay of the microteaching cycle.
I-A is further used to construct models of teaching behaviour by specifying in the 100 cells of the Interaction Matrix ones that one would expect a "good" teacher to use more frequently in a particular form of teaching - or in using a particular skill - than would a "less good" teacher. An example of this is the Q-A/9,3 Model (see Appendix). In other words we specified behaviour, described in terms of Observable Events that the trainees could concentrate on - or focus on during the View session of the cycle.

University Teachers

Moving on to training university teachers in Aberdeen I initially attempted to apply the same rationale to this type of teacher training. However for monologue teaching, the basic Flanders categories prove totally unusable - the main reason being the Non-Interactive nature of university teaching. Other published systems of systematic observation also proved unsuitable and for this very reason I had to construct a new system that I could use with university staff in my training work.

This new system Content Analysis of Lecturing (CAL) is very crude at present but it is showing sufficient promise to allow me talk about it (I hope you agree!) It is also providing me with the opportunity to develop associated training techniques.

The system is based on work by Gage (1968) where he suggested that an important difference between what can be called Effective and Ineffective Lecturers is found in the use of Examples/

Examples associated with Teaching Points.

Effective lecturers tend to use more Point - Example or Rul-Eg, units in a lecture, than ineffective lecturers. For Example, a lecturer would give an item of information, a fact or a generalization - i.e. a Point and relate to this a concrete example - before moving on to the next teaching point in the lecture. Points and Examples are the first two categories in this systematic observation system.

In the system of observation that I am now describing I have added only 3 additional categories to these basic two.

ASIDES (Instructional) verbal behaviour of relevance to the lecture - not intended as part of an argument or thesis. For example, references, objectives, aims or summaries of teaching points. ASIDES (Non-Instructional/Useless) no direct relevance to topic of lecture (or aims of lecture) e.g. Greetings, jokes etc.

A DUSTBIN - (X) confusion, silence uncodable verbal behaviour included because of the use of Time Sampling method recording the data.

That is POINTS. EXAMPLES; ASIDES - instructional; ASIDES - useless; and a 'DUSTBIN' category.

Five categories making up a method of recording the Content of lectures with a series of mutually inclusive categories that are exhaustive of all verbal behaviour.

Reference

Gage, N.L. (1968) An Analytical Approach in Research on Instructional Methods, Phi Delta Kappan, June, 601-606

Appendix

The Q-A/9, 3 Model

An interaction analysis matrix can be used in the training of teachers by setting up a model of expected behaviour before practice and comparing the achieved pattern of cell frequencies with the model. In the FIAC system a 10 x 10 matrix can be constructed that represents the transition of coding from category to category. From a string of codings (055408835 etc) a series of cells are recorded (0-5/5-5/5-4/4-0/ etc) representing the transition from one category to another. Taking as a starting point an operational definition of a style of teaching certain cells can be predicted as being "desirable" (that is, used most frequently). For example, if one takes the general strategies of non-directive inquiry based teaching, one can operationalise this in terms of a series of (FIAC) matrix cells. Namely, 2-3/3-3/-34/3-5/3-8/3-9/4-3/4-4/4-5/4-8/4-9/5-4/ 5-5/8-3/8-4/8-8/8-9/9-2/9-3/9-4/9-9/

see Figure 1

These 21 cells should encompass the expected style. The trainee teaches a lesson is coded and the codings transferred to the matrix. A comparison is then made of the number and frequency of cells in the lesson. That is how well does the model "explain" the teaching. A percentage agreement can be computed. If the teaching is explained in a satisfactory way by the model (say 80% or more of the lesson accounted for by the model) then the lesson may be considered o.k.

The model can also be used to describe any observed lesson by fitting different models to the observed pattern. In training this is done by hand with, for example, transparent overlays of different styles on to paper matrices. In a research strategy this is accomplished using a computer to do the "matching".

In using this technique with uninterrupted monologue, difficulties arise. The technique seems to work best with interactive systems where the nature of category transitions is important.

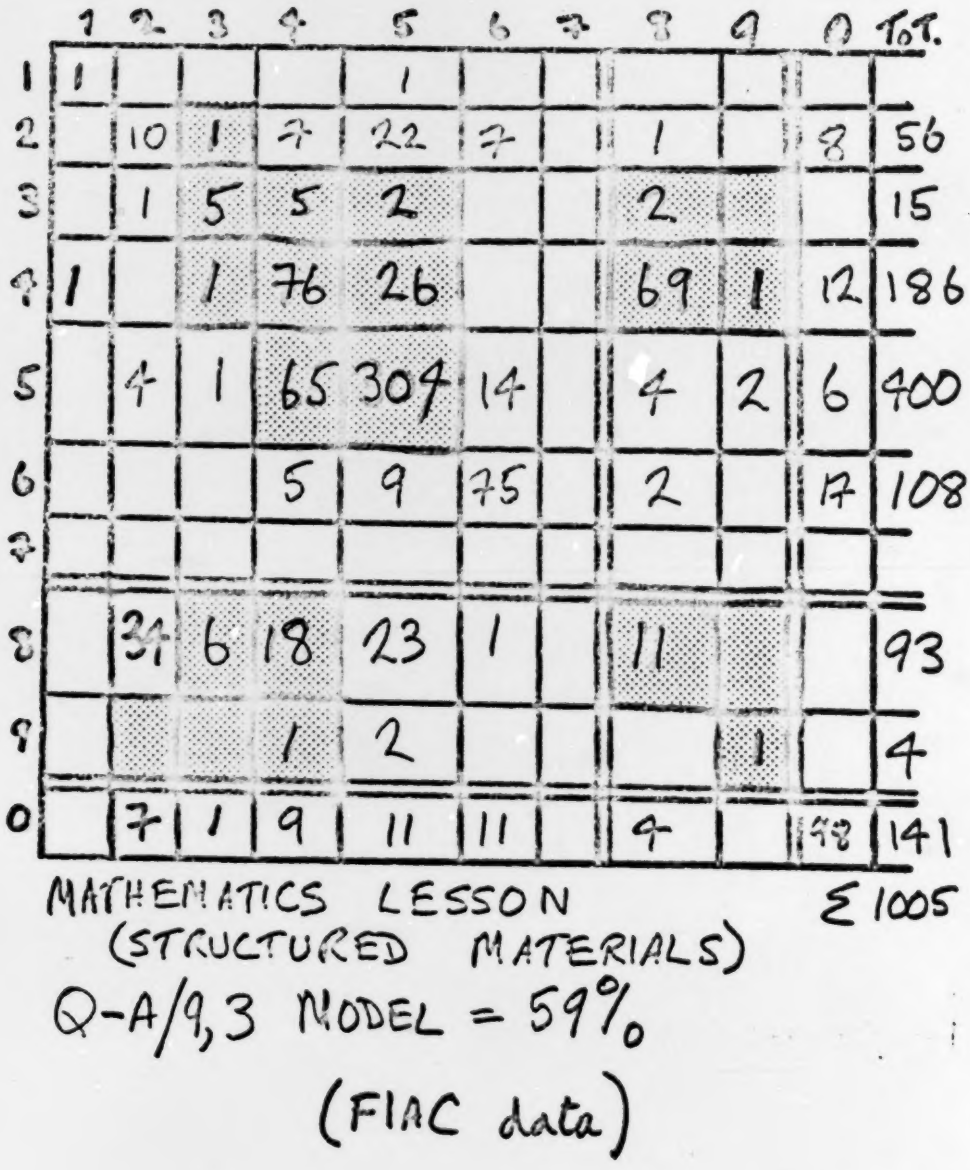

Figure.1 10 x 10 Matrix showing Model Cells